

# Tropical Pacific Observing Needs to Advance Process Understanding and Representation in Models Workshop

MAY 24-26, 2021 | VIRTUAL

## Poster Sessions and Presenters

<https://app.virtualpostersession.org/e/54fbb8cc9e89bccf62a2649aba48a957>

### Day 1 (May 24, 2021)

#### Session/Track: Multi-scale Ocean-Atmosphere Coupled Processes

	<u>Name</u>	<u>Affiliation</u>	<u>Abstract Title</u>
1.	Antonietta Capotondi	NOAA/PSL and University of Colorado/CIRES	How influential is the MJO on ENSO development?
2.	Shuyi Chen	University of Washington	Impacts of Precipitation-Evaporation-Salinity Coupling on Upper Ocean Stratification over the Tropical Pacific
3.	Piyush Garg	University of Illinois Urbana-Champaign	Diurnal Cycle of Tropical Oceanic Mesoscale Cold Pools
4.	Yosafat Donni Haryanto	Indonesia Agency of Meteorology Climatology and Geophysics (BMKG)	Study of the relationship between the Madden Julian Oscillation and Sea Currents Pattern in the Sunda Strait
5.	Khafid Rizki Pratama	Indonesia Agency of Meteorology Climatology and Geophysics (BMKG)	Equatorial convection during Winter Monsoon with MJO and the interaction of the Indo-Western Pacific Ocean over the Maritime Continent
6.	Yakelyn Ramos Jauregui	University of Washington	Multiscale Processes in MJO-induced Warm Pool Eastward Extension and the Onset of 2018 El Niño
7.	Dhrubajyoti Samanta	Nanyang Technological University	Equatorial Pacific sea surface temperature is one of the drivers of tropical Pacific double ITCZ bias in climate models
8.	Yolande Serra	University of Washington	Review of Tropical East Pacific Air-Sea Interface, Ocean and Atmospheric Parameter Spread in Observations, Reanalyses and Coupled Models
9.	Samantha Stevenson	University of California, Santa Barbara	Cloud Feedback Biases Influence Model Projections of Extreme El Niño
10.	Xiaolin Zhang	University of Hamburg	On the Rapid Ocean Response to High-Frequency Intense Rainfall

#### Session/Track: Earth System Prediction

	<u>Name</u>	<u>Affiliation</u>	<u>Abstract Title</u>
1.	Kim Cobb	Georgia Tech	Water Isotope Observations as Dynamical Bridge from the Past to the Future

2.	Jessica Conroy	University of Illinois Urbana-Champaign	Leveraging seawater $\delta^{18}\text{O}$ values to extract paleosalinity information from coral $\delta^{18}\text{O}$ records
3.	Yassir Eddebbar	Scripps Institution of Oceanography	Drivers of Tropical Pacific Oxygen Distribution and Variability: Model Insights and Observing Needs
4.	Virendra Goswami	Indian Institute of Technology(IIT) & 'Environment and Peace Foundation'	Satellite Study of Correlation of Climate Variability with Air-Sea $\text{CO}_2$ exchange to develop Pacific Sea-Level Variability Forecasting Models (PSLVFM) Over Tropical Pacific Oceanic Regions.
5.	Anoop Mahajan	Indian Institute of Tropical Meteorology	An overview of iodine chemistry over the Indian and Southern Ocean waters using ship-based observations and modelling
6.	Kakha Nadiradze	AFRD (Georgia)	Eutrophication and Acidification problems
7.	Desislava Petrova	Climate and Health Program, Barcelona Institute for Global Health	Multiyear Statistical Prediction of ENSO Enhanced by the Tropical Pacific Observing System
8.	Maheswar Pradhan	Indian Institute of Tropical Meteorology, Pune	Importance of moored buoy observation towards monsoon prediction
9.	Sara Sanchez	University of Colorado, Boulder	Improving paleo hydroclimate reconstructions with observations of $\text{d}^{18}\text{O}_{\text{sw}}$
10.	Xiujun Wang	Beijing Normal University	Sensitivity of asymmetric Oxygen Minimum Zones to mixing intensity and biological processes in the tropical Pacific: a basin-scale model study

End of Day 1 Poster Presenters

## Day 2 (May 25, 2021)

### Session/Track: Atmospheric Studies and Observing Needs

	<b>Name</b>	<b>Affiliation</b>	<b>Abstract Title</b>
1.	H Annamalai	IPRC, University of Hawaii	Accurate measurements of surface turbulent fluxes to constrain climate model processes
2.	Adnan Arshad	China Agricultural University	Heatwaves risks and modeling the potential of urban greenspaces in Karachi city
3.	Gijs de Boer	University of Colorado, Boulder	In situ observations of the near-shore atmospheric boundary layer during ATOMIC/EUREC4A from small Uncrewed Aircraft Systems
4.	Simon de Szoeko	Oregon State University	Surface air humidity from autonomous observing systems
5.	Christian Dominguez	UNAM	Easterly wave contributions to seasonal rainfall over the tropical Americas in observations and a regional climate model
6.	Zhe Feng	Pacific Northwest National Laboratory	A Global High-resolution Mesoscale Convective System Tracking Database
7.	Samson Hagos	Pacific Northwest National Laboratory	The Relationship between Tropical Precipitation and Precipitable Water in CMIP6 Simulations and Implications for Observations
8.	Larry O'Neill	Oregon State University	Evaluation of zonal wind anomalies by the Tropical Pacific surface wind observing system
9.	Scott Powell	Naval Postgraduate School	Critical Updraft Quantities in LES Models of Shallow to Deep Convective Transitions
10.	Eric Skillingstad	Oregon State University	Boundary layer scale interaction in the ITCZ: The role of convective cold pools
11.	Rachel Storer	University of California, Los Angeles	Using modeling and observations to better understand the (changing) behavior of deep convection
12.	Giuseppe Torri	University of Hawaii	A new dataset of rainfall isotopes on the island of O'ahu
13.	Samantha Wills	University of Washington	Cold Pools Observed by Uncrewed Surface Vehicles in the Central and Eastern Tropical Pacific

### Session/Track: Ocean Studies and Observing Needs

	<b>Name</b>	<b>Affiliation</b>	<b>Abstract Title</b>
1.	Deepak Cherian	NCAR	Spatial variability of eastern Pacific cold tongue turbulence
2.	Allan Clarke	Florida State University	Equatorial ENSO physics
3.	Meghan Cronin	NOAA PMEL	Diurnal Cycle of Air-Sea Interactions in Frontal Regions
4.	Anna-Lena Deppenmeier	NCAR	The role of tropical instability waves in modulating water mass transformation
5.	Maria Gabriela Escobar Franco	University of Toulouse III - Paul Sabatier/ LEGOS	Interaction between the TIWs and the Intraseasonal equatorial Kelvin wave in the Pacific
6.	Chris Fairall	NOAA PSL	The need for new observations of near-surface ocean-side interaction processes for physical and chemical flux modeling
7.	Andy Jessup	University of Washington	IRISS: Infrared In situ Skin and Sub-skin Temperature Measurements from USVs and buoys
8.	Devanarayana Rao Mohan Rao	York University	Mechanism of Interannual Cross-equatorial Overturning Anomalies in the Pacific Ocean – An Investigation using Ocean Reanalysis.

9.	Kelvin Richards	University of Hawaii	The importance of turbulent mixing in the ocean
10.	Kyle Shackelford	Colorado State University	Spatiotemporal Characteristics of Indian Ocean Rain Layers
11.	Dan Whitt	NASA Ames	Large eddy simulations of upper-ocean turbulence across the equatorial Pacific Cold Tongue
12.	Dongxiao Zhang	CICOES/UW and NOAA/PMEL	Saildrone: Uncrewed Surface Vehicle for surface current and air-sea flux observation

End of Day 2 Poster Presenters

## Day 3 (May 26, 2021)

### Session/Track: OSSEs, Data Assimilation, Reanalyses

	<b><u>Name</u></b>	<b><u>Affiliation</u></b>	<b><u>Abstract Title</u></b>
1.	Magdalena Balmaseda	ECMWF	Observational needs to for advancing subseasonal-to-seasonal forecasting systems: and ECMWF perspective
2.	Charlotte DeMott	Colorado State University	Diagnosing sources of tropical SST drift in S2S forecast models
3.	Yosuke Fujii	JMA/MRI	Evaluation of a coupled atmosphere-ocean reanalysis using the tropical Pacific mooring data
4.	Eric Hackert	GMAO/NASA Goddard	Effect of rain-adjusted Aquarius and SMAP satellite sea surface salinity on ENSO Predictions from the GMAO S2S Forecast System
5.	Ariane Verdy	Scripps Institution of Oceanography	The Tropical Pacific Ocean State Estimate (TPOSE) Resource
6.	Caihong Wen	NOAA/NWS/NCEP/Climate prediction center	Importance of off-equatorial subsurface preconditions for ENSO evolution and predictability
7.	Jieshun Zhu	CPC/NCEP/NWS/NOAA and ESSIC/UMCP	OSSE studies for the Tropical Pacific Observing System

### Session/Track: Observing the Ocean-Atmosphere Transition Zone

	<b><u>Name</u></b>	<b><u>Affiliation</u></b>	<b><u>Abstract Title</u></b>
1.	Carol Anne Clayson	Woods Hole Oceanographic Institution	In situ and satellite flux observations in the tropical Pacific
2.	Frederick Bingham	University of North Carolina, Wilmington	Sea Surface Salinity Short Term Variability in the Tropics from Mooring Data
3.	Chia-Wei Hsu	Colorado State University	Estimating Surface Flux Bias Feedbacks to the Intra-seasonal Precipitation in the CEMS2 and E3SM
4.	Suneil Iyer	University of Washington	Small-scale variations in wave slope and momentum flux from wave-current interactions
5.	Frank Bryan	NCAR	The need and goals for observations in the transition zone surrounding the equator
6.	Jack Reeves Eyre	University of Washington	Understanding the atmospheric response to abrupt submesoscale ocean fronts using Saildrone direct covariance measurements
7.	Emily Riley Dellaripa	Colorado State University	Intraseasonal variability in precipitation and fluxes across the tropics observed by buoys and CYGNSS
8.	Aneesh Subramanian	University of Colorado, Boulder	Butterfly: revealing the oceans' influence on our weather and climate
9.	Elizabeth Thompson	NOAA PSL	Air-sea flux responses to warm or fresh ocean surface stable layers: measured processes and modeling considerations
10.	Ho-Hsuan Wei	University of Colorado, Boulder	Tropical Pacific Air-Sea Interaction: Processes and Biases Relevant to ENSO and MJO
11.	Jacquelyn Witte	NCAR	NCAR's Integrated Surface Flux System (ISFS): A campaign driven micronet supporting of atmospheric boundary layer research
12.	Chidong Zhang	NOAA PMEL	A different look at the double ITCZ problem

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